

I claim:

## CLAIMS

- 1    1. An apparatus comprising:  
2        a first video monitor;  
3        a second video monitor;  
4        a vehicle interface for receiving a plurality of control signals from a vehicle;  
5        a plurality of video cameras that each provide a video output; and  
6        a video switching mechanism coupled to the first video monitor, the second video  
7        monitor, the vehicle interface, and the plurality of video cameras, the video switching  
8        mechanism comprising:  
9                a first monitor source selector that determines which video output of the  
10          plurality of video cameras to display on the first video monitor;  
11                a first default source specification that determines which video output of  
12          the plurality of video cameras to display on the first video monitor when no  
13          control signals are active on the vehicle interface;  
14                a second monitor source selector that determines which video output of the  
15          plurality of video cameras to display on the second video monitor independent of  
16          the video output displayed on the first video monitor; and  
17                a second default source specification that determines which video output  
18          of the plurality of video cameras to display on the second video monitor.
- 1    2. The apparatus of claim 1 further comprising a user interface that allows a user to  
2        modify the first default source specification and the second default source specification.

1   3.     The apparatus of claim 1 wherein the first monitor source selector displays on the  
2   first video monitor a video output of a video camera disposed to provide a view of the left  
3   side of the vehicle in response to a left turn signal on the vehicle being activated on the  
4   vehicle interface.

1   4.     The apparatus of claim 1 wherein the first monitor source selector displays on the  
2   first video monitor a video output of a video camera disposed to provide a view of the  
3   right side of the vehicle in response to a right turn signal on the vehicle being activated on  
4   the vehicle interface.

1   5.     The apparatus of claim 1 wherein the first monitor source selector displays on the  
2   first video monitor a video output of a video camera disposed to provide a rear view of  
3   the vehicle in response to a signal on the vehicle being activated on the vehicle interface  
4   that indicates that the vehicle is in reverse.

1   6.     The apparatus of claim 1 wherein the video switching mechanism displays on the  
2   first video monitor a graphical view indicator that indicates which video output is  
3   currently being displayed on the first video monitor.

1    7. An apparatus comprising:  
2        a video monitor;  
3        a vehicle interface for receiving a plurality of control signals from a vehicle;  
4        a plurality of video cameras that each provide a video output; and  
5        a video switching mechanism coupled to the video monitor, the vehicle interface,  
6        and the plurality of video cameras, the video switching mechanism comprising:  
7                a source selector that determines which video output of the plurality of  
8        video cameras to display on the video monitor;  
9                a default source specification that determines which video output of the  
10      plurality of video cameras to display on the first monitor when no control signals  
11      are active on the vehicle interface; and  
12                a user interface that allows a user to change the default source  
13      specification.

1    8. The apparatus of claim 7 wherein the source selector displays on the video  
2        monitor a video output of a video camera disposed to provide a view of the left side of the  
3        vehicle in response to a left turn signal on the vehicle being activated on the vehicle  
4        interface.

1    9. The apparatus of claim 7 wherein the source selector displays on the video  
2        monitor a video output of a video camera disposed to provide a view of the right side of  
3        the vehicle in response to a right turn signal on the vehicle being activated on the vehicle  
4        interface.

1    10. The apparatus of claim 7 wherein the source selector displays on the video  
2        monitor a video output of a video camera disposed to provide a rear view of the vehicle in  
3        response to a signal on the vehicle being activated on the vehicle interface that indicates  
4        that the vehicle is in reverse.

1    11.    The apparatus of claim 7 wherein the video switching mechanism displays on the  
2    video monitor a graphical view indicator that indicates which video output is currently  
3    being displayed on the video monitor.

1    12.    The apparatus of claim 7 further comprising:  
2              a second video monitor;  
3              wherein the video switching mechanism further comprises:  
4                  a second monitor source selector that determines which video output of the  
5                  plurality of video cameras to display on the second video monitor independent of  
6                  the video output displayed on the first video monitor; and  
7                  a second default source specification that determines which video output  
8                  of the plurality of video cameras to display on the second video monitor.

1    13.    The apparatus of claim 12 further comprising a user interface that allows a user to  
2    change the second monitor source selector to display a different output on the second  
3    video monitor independently from the output displayed on the video monitor.

1    14. An apparatus comprising:  
2       a video monitor;  
3       a vehicle interface for receiving a plurality of control signals from a vehicle;  
4       a plurality of video cameras that each provide a video output; and  
5       a video switching mechanism coupled to the video monitor, the vehicle interface,  
6       and the plurality of video cameras, the video switching mechanism comprising:  
7               a source selector that determines which video output of the plurality of  
8       video cameras to display on the video monitor; and  
9               a view indicator mechanism that displays a graphical view indicator on the  
10      video monitor that indicates which video output is currently being displayed on  
11      the video monitor.

1    15. The apparatus of claim 14 wherein the source selector displays on the video  
2       monitor a video output of a video camera disposed to provide a view of the left side of the  
3       vehicle in response to a left turn signal on the vehicle being activated on the vehicle  
4       interface.

1    16. The apparatus of claim 14 wherein the source selector displays on the video  
2       monitor a video output of a video camera disposed to provide a view of the right side of  
3       the vehicle in response to a right turn signal on the vehicle being activated on the vehicle  
4       interface.

1    17. The apparatus of claim 14 wherein the source selector displays on the video  
2       monitor a video output of a video camera disposed to provide a rear view of the vehicle in  
3       response to a signal on the vehicle being activated on the vehicle interface that indicates  
4       that the vehicle is in reverse.

1    18.    The apparatus of claim 14 wherein the video switching mechanism displays on the  
2    video monitor a graphical view indicator that indicates which video output is currently  
3    being displayed on the video monitor.

1       19. An apparatus comprising:  
2           a first video monitor mounted in the view of a driver of a vehicle;  
3           a second video monitor mounted in the interior of the vehicle;  
4           a vehicle interface for receiving a plurality of control signals from the vehicle;  
5           a plurality of video cameras coupled to the vehicle that each provide a video  
6       output; and  
7           a video switching mechanism coupled to the first video monitor, the second video  
8       monitor, the vehicle interface, and the plurality of video cameras, the video switching  
9       mechanism comprising:  
10              a first monitor source selector that determines which video output of the  
11       plurality of video cameras to display on the first video monitor;  
12              a first default source specification that determines which video output of  
13       the plurality of video cameras to display on the first video monitor when no  
14       control signals are active on the vehicle interface;  
15              a second monitor source selector that determines which video output of the  
16       plurality of video cameras to display on the second video monitor independent of  
17       the video output displayed on the first video monitor; and  
18              a second default source specification that determines which video output  
19       of the plurality of video cameras to display on the second video monitor;  
20              a user interface that allows a user to modify the first default source  
21       specification and the second default source specification;  
22              wherein the first monitor source selector displays on the first video  
23       monitor a video output of a video camera disposed to provide a view of the left  
24       side of the vehicle in response to a left turn signal on the vehicle being activated  
25       on the vehicle interface;  
26              wherein the first monitor source selector displays on the first video  
27       monitor a video output of a video camera disposed to provide a view of the right  
28       side of the vehicle in response to a right turn signal on the vehicle being activated  
29       on the vehicle interface;

(claim 19 continued)

29           wherein the first monitor source selector displays on the first video  
30       monitor a video output of a video camera disposed to provide a rear view of the  
31       vehicle in response to a signal on the vehicle being activated on the vehicle  
32       interface that indicates that the vehicle is in reverse;

33           wherein the video switching mechanism displays on the first video  
34       monitor a graphical view indicator that indicates which video output is currently  
35       being displayed on the first video monitor.

1    20. A method for displaying on a video monitor the outputs of a plurality of video  
2 cameras mounted on a vehicle according to control signals received on a vehicle  
3 interface, the method comprising the steps of:

4                 providing a first default source specification that determines which output is  
5 displayed on the video monitor when no control signals are present on the vehicle  
6 interface;

7                 providing a user interface that allows a user to define a second default source  
8 specification that determines which output is displayed on the video monitor when no  
9 control signals are present on the vehicle interface;

10                when no control signals are present on the vehicle interface and the user has not  
11 specified a default source specification via the user interface, displaying the output  
12 determined by the first default source specification; and

13                when no control signals are present on the vehicle interface and the user has  
14 specified a second default source specification via the user interface, displaying the  
15 output specified by the second default source specification.

1    21. The method of claim 20 further comprising the step of displaying on the video  
2 monitor a video output of a video camera disposed to provide a view of the left side of the  
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle  
4 interface.

1    22. The method of claim 20 further comprising the step of displaying on the video  
2 monitor a video output of a video camera disposed to provide a view of the right side of  
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle  
4 interface.

1    23.    The method of claim 20 further comprising the step of displaying on the video  
2    monitor a video output of a video camera disposed to provide a rear view of the vehicle in  
3    response to a signal on the vehicle being activated on the vehicle interface that indicates  
4    that the vehicle is in reverse.

1    24.    The method of claim 20 further comprising the step of displaying on the video  
2    monitor a graphical view indicator that indicates which video output is currently being  
3    displayed on the video monitor.

1    25. A method for displaying on a video monitor the outputs of a plurality of video  
2 cameras mounted on a vehicle according to control signals received on a vehicle  
3 interface, the method comprising the steps of:

4                 displaying an output of one of the plurality of video cameras on the video  
5 monitor; and

6                 displaying a graphical view indicator on the video monitor that indicates which  
7 video output is currently being displayed on the video monitor.

1    26. The method of claim 25 further comprising the step of displaying on the video  
2 monitor a video output of a video camera disposed to provide a view of the left side of the  
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle  
4 interface.

1    27. The method of claim 25 further comprising the step of displaying on the video  
2 monitor a video output of a video camera disposed to provide a view of the right side of  
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle  
4 interface.

1    28. The method of claim 25 further comprising the step of displaying on the video  
2 monitor a video output of a video camera disposed to provide a rear view of the vehicle in  
3 response to a signal on the vehicle being activated on the vehicle interface that indicates  
4 that the vehicle is in reverse.

1    29. A method for displaying on a video monitor in a vehicle the outputs of a plurality  
2    of video cameras mounted on the vehicle according to control signals received on a  
3    vehicle interface, the method comprising the steps of:

4                 providing a first default source specification that determines which output is  
5    displayed on the video monitor when no control signals are present on the vehicle  
6    interface;

7                 providing a user interface that allows a user to define a second default source  
8    specification that determines which output is displayed on the video monitor when no  
9    control signals are present on the vehicle interface;

10                when no control signals are present on the vehicle interface and the user has not  
11   specified a default source specification via the user interface, displaying the output  
12   determined by the first default source specification;

13                when no control signals are present on the vehicle interface and the user has  
14   specified a second default source specification via the user interface, displaying the  
15   output specified by the second default source specification;

16                when a left turn signal is active on the vehicle interface, displaying on the video  
17   monitor a video output of a video camera disposed to provide a view of the left side of the  
18   vehicle;

19                when a right turn signal is active on the vehicle interface, displaying on the video  
20   monitor a video output of a video camera disposed to provide a view of the right side of  
21   the vehicle;

22                when a signal on the vehicle interface that indicates that the vehicle is in reverse is  
23   active, displaying on the video monitor a video output of a video camera disposed to  
24   provide a rear view of the vehicle;

25                displaying on the video monitor a graphical view indicator that indicates which  
26   video output is currently being displayed on the video monitor; and

27                displaying on a second video monitor an output of a video camera independently  
28   of the display on the video monitor.

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